

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Canceled)
2. (New) An electrical motor system comprising:
a motor having a stator and a rotor which define an energy storage gap
therebetween; and
an energy storage capacitor connected in series with the stator to form an LC
circuit therewith wherein the energy storage capacitor is sized to store the energy
within the gap between the stator and rotor.
- 3 (New) The motor of claim 2 wherein the stator comprises a stator coil
and the rotor comprises a rotor coil and the rotor and stator coils are connected in
series.
4. (New) The motor of claim 3 wherein the stator coil and the rotor coil are
connected in series with the energy storage capacitor.
5. (New) The motor of claim 2 further comprising a connection for
receiving and providing power to the cause the LC circuit to oscillate.

6. (New) The motor of claim 2 wherein the gap between the rotor and the stator is sized and configured to contain the total magnetic energy of the motor.

7. (New) The motor of claim 6 wherein the capacitor is sized and configured to store electrical energy equal to the magnetic energy of the motor.

8. (New) An electrical motor comprising:
a stator having at least one winding;
a rotor having at least one winding serially connected to the stator; and
an energy storage capacitor serially connected to the stator and the rotor, the energy storage capacitor being sized to store the magnetic energy equivalence of the motor.

9. (New) The electrical motor of claim 8 wherein the capacitor is sized to form a resonant circuit with an inductance of the motor.

10. (New) The electrical motor of claim 9 wherein the capacitor is sized to form a resonant LC tank circuit with the inductance of the motor.

11. (New) The electrical motor system of claim 10 further comprising a connection for receiving and providing power to cause the LC tank circuit to oscillate.

12. (New) The electrical motor of claim 8 wherein the capacitor is configured to resonate at the power signal frequency of the motor.

13. (New) An electrical motor comprising:
- stator means;
- rotor means serially connected to the stator means;
- magnetic energy storage means configured to store magnetic energy between the stator means and the rotor means; and
- electrical energy storage means serially connected to the stator means and the rotor means and for storing electrical energy equivalent to the magnetic energy of the magnetic energy storage means.
14. (New) The electrical motor of claim 13 wherein the magnetic energy storage means is a gap defined by the stator means and the rotor means.
15. (New) The electrical motor of claim 13 wherein the electrical energy storage means is a capacitor.
16. (New) The electrical motor of claim 13 wherein the magnetic energy storage means is a gap and the electrical energy storage means is a capacitor.
17. (New) The electrical motor of claim 13 wherein the stator means, rotor means, magnetic energy storage means and the electrical energy storage means forms a resonant circuit.

18. (New) The electrical motor of claim 17 further comprising connection means for receiving and providing power to the cause the resonant circuit to oscillate.

19. (New) The electrical motor of claim 18 wherein the electrical energy storage means is sized and configured to resonate at the operating frequency of the motor.

20. (New) The electrical motor of claim 19 wherein the stator means, rotor means and magnetic energy storage means define an inductance for the resonant circuit.